

REMARKS

I. Overview

Claims 9-15 are pending in the present application. Claims 1-8 were previously canceled. Claims 9 and 12 have been amended and new claim 15 is added herein. Applicant respectfully requests reconsideration of the claims in view of the following remarks.

The issues raised by the Examiner in the final Office Action dated September 10, 2008 ("Final Action" or "FOA") are as follows:

- Claims 9-14 have been rejected under 35 U.S.C. § 103(a) as assertedly being unpatentable over U.S. Patent No. 5,491,497 to Suzuki (hereinafter "Suzuki") in view of U.S. Patent No. 5,128,671 to Thomas Jr. (hereinafter "Thomas") and U.S. Patent No. 4,493,219 to Sharp, et al. (hereinafter "Sharp") and further in view of U.S. Patent No. 5,926,168 to Fan (hereinafter "Fan").

Applicant respectfully traverses the outstanding claim rejections and requests reconsideration and withdrawal in light of the amendments and remarks presented herein.

II. Examiner Interview

The inventor, Brad Armstrong, and Applicant's attorney, Michael Fogarty, met with Examiner William Boddie and Supervisory Patent Examiner Sumati Lefkowitz on February 25, 2009. Mr. Armstrong and Mr. Fogarty sincerely thank Examiners Lefkowitz and Boddie for their time and consideration during the Interview. The Examiners provided an Interview Summary at the end of the meeting. The parties discussed claims 9 and 12, the Suzuki reference (U.S. Patent No. 5,491,497), and the "single input member" and the "secondary input member" claim elements. Agreement was not reached; however, the parties agreed that Applicant would submit the present Supplemental Amendment for consideration.

III. Amendments

Claims 9 and 12 have been amended to further clarify the "secondary input member." Support for these amendments can be found in the original specification at pages 38-40 and in Figures 5 and 6. No new matter has been added to the application or claims.

New dependent claim 15 includes elements previous found in independent claim 12.

IV. Claim Rejection – 35 U.S.C. § 103

Independent claims 9 and 12 were rejected in the Final Action under 35 U.S.C. § 103(a) as being unpatentable over a combination of Suzuki, Thomas, Jr., Sharp and Fan. The claims, however, include limitations that are not taught or suggested by any of the cited references.

Claims 9 and 12 require:

An image controller allowing control of an image generation device capable of creating three-dimensional imagery, the image controller comprising:

a single input member capable of being manipulated in six degrees of freedom by a human hand; . . .

a secondary input member capable of being controlled by the human hand to effect bidirectional movement on at least one axis;

two additional sensors located on [the upper surface of] the circuit board, the two additional sensors indicate the bidirectional movement of the secondary input member; . . .

one button sensor located on [the upper surface of] the circuit board controls an ON/OFF function;

The cited references do not teach or suggest six degrees of freedom (6 DOF)

The present application teaches that “[a] handle capable of being ‘manipulated’ in 6 DOF [Degrees of Freedom] means only that it can be linearly moved and/or rotated relative to the reference member.” Application at 16, lines 8-10 (emphasis added). The application further describes the movement of the disclosed 6 DOF controller as providing “information describing rotation or rotational force of the hand operable input member in either direction about three mutually perpendicular bi-directional axes herein referred to as yaw, pitch and roll, (or first, second and third); and information describing linear movement of the hand operable input member along the axes” Application at 11, lines 5-9 (emphasis added).

Claims 9 and 12 require “a single input member capable of being manipulated in six degrees of freedom by a human hand.” The Final Action cites Suzuki as teaching a single input member capable of being manipulated in six degrees of freedom. FOA at 3. In particular, the

Final Action points to Suzuki's housing "6" in Figure 2 as the claimed "single input member." *Id.* The Final Action further points to Suzuki's Figures 4a-11b as illustrating manipulation in six degrees of freedom. *Id.*

However, the Suzuki reference clearly limits the movement of housing 6 to four degrees of freedom (4 DOF) as illustrated in Figures 4a-11b. Upper housing section 6 and lower housing section 7 together form Suzuki's integral housing 18. Column 4, lines 12-13; Figure 5a. The Suzuki device functions by moving integral operating member 17 relative to integral housing 18. *See, e.g.*, column 4, lines 9-13; Figures 4a, 4b. It is clear from the Suzuki disclosure and Figures 4a-11b that integral operating member 17 is only capable of movement in four degrees of freedom relative to integral housing 18.

Figures 4a-5b are side views of the Suzuki input device showing rotation around the X-axis. Column 4, lines 3-21. Figures 6a-7b are rear views of the Suzuki input device showing rotation about the Y axis. Column 4, lines 22-38. Figures 8a-9b are top views of the Suzuki input device showing rotation about the Z-axis. Column 4, lines 39-56. Figures 10a-11b are side views of the Suzuki input device showing linear movement ("vertical slide") along the Z-axis. Column 4, line 57-column 5, line 6. Accordingly, Suzuki discloses three degrees of rotational movement and one degree of linear movement - for a total of four degrees of freedom.

There is no disclosure in Suzuki that integral operating member 17 is capable of linear movement in the X- or Y-axes relative to integral housing 18. In fact, it is clear from the construction of the Suzuki device as illustrated in Figures 2-11b that stick 5 prevents such movement. Therefore, Suzuki not only fails to teach or suggest a 6 DOF input device, but attempting such operations (i.e. linear movement in the X- and Y-axes) would destroy Suzuki's 4 DOF device by breaking stick 5. Furthermore, even if such movement were possible, there is no capability to measure or detect such movement purely along the X- and Y-axes in the Suzuki device.

In view of the above remarks, Applicant submits that the Suzuki 4 DOF device does not teach or suggest "a single input member capable of being manipulated in six degrees of freedom by a human hand" as required by independent claims 9 and 12. The other cited references were not cited for this feature, and upon further review also fail to teach manipulation in degrees of

freedom. Accordingly, Applicant respectfully requests withdrawal of the pending rejections and allowance of the pending claims.

The cited references do not teach or suggest a secondary input member

Claims 9 and 12 require “a secondary input member capable of being controlled by the human hand to effect bidirectional movement on at least one axis.” The Final Action cites pushing pins 19e and 19f as teaching the claimed “secondary input member.” FOA at 3. However, the Suzuki disclosure clearly shows that pushing pins 19e and 19f are part of housing 6. Column 4, lines 49-53. Housing 6 was previously identified in the Final Action as the claimed “single input member.” FOA at 3. Claims 9 and 12 require a separate “secondary input member.” Applicant submits that housing 6 with integral pushing pins 19e and 19f cannot be both the “single input member” and the “secondary input member.”

Moreover, the claimed secondary input member must “effect bidirectional movement.” The cited pushing pins 19e and 19f do not “effect bidirectional movement” as required by claims 9 and 12.

Applicant respectfully submits that even if the Suzuki housing 6 is a “single input member,” it cannot also be the “secondary input member” as required in claims 9 and 12. The other cited references were not cited for this feature, and upon further review also fail to teach a “secondary input member.” Accordingly, Applicant respectfully requests withdrawal of the pending rejections and allowance of the pending claims.

The cited references do not teach or suggest the claimed “one button sensor”

Claims 9 and 12 require “one button sensor located on . . . the circuit board controls an ON/OFF function.” In claim 9, the one button sensor is located “the upper surface of the circuit board.” The Final Action cites push-button switch 2e as teaching the claimed “one button sensor.” FOA at 4. However, the Final Action previously identified push-button switch 2e as one of the claimed “two additional sensors.” FOA at 3. Claims 9 and 12 require separate “two additional sensors” and “one button sensor” elements. Applicant submits that push-button switch 2e cannot be both an “additional sensor[s]” and a “one button sensor.”

Applicant respectfully submits that even if the Suzuki push-button switch 2e is an “additional sensor,” it cannot also be the “one button sensor” as required in claims 9 and 12. The other cited references were not cited for this feature, and upon further review also fail to teach a “one button sensor.” Accordingly, Applicant respectfully requests withdrawal of the pending rejections and allowance of the pending claims.

Claims 10, 11, and 13-15 depend from independent claims 9 and 12, respectively, and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicant’s attorney at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge, or credit any overpayment, Deposit Account No. 50-1065.

Respectfully submitted,

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Date

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